

WHAT IS CLAIMED IS:

- 1 1. In a vacuum cleaner including a housing, a primary dirt
2 collector arranged in said housing, a suction motor unit
3 arranged in said housing, an inlet suction channel
4 communicating through said primary dirt collector to an
5 inlet of said suction motor unit, and an exhaust outlet
6 passage communicating from an outlet of said suction motor
7 unit out of said housing to an environment outside of said
8 vacuum cleaner,
9 an improvement comprising an exhaust filter
10 arrangement that is interposed in said exhaust outlet
11 passage and that comprises an exhaust filter material
12 arranged externally from and externally covering at least
13 a large surface portion of said housing making up at least
14 one-third of a total outer surface area of said housing of
15 said vacuum cleaner.
- 1 2. The improvement in the vacuum cleaner according to claim 1,
2 wherein said large surface portion of said housing that is
3 externally covered by said exhaust filter material makes up
4 at least one-half of said total outer surface area of said
5 housing.
- 1 3. The improvement in the vacuum cleaner according to claim 1,
2 wherein said large surface portion of said housing that is
3 externally covered by said exhaust filter material makes up

at least two-thirds of said total outer surface area of
said housing.

4. The improvement in the vacuum cleaner according to claim 1,
wherein said exhaust filter material is arranged to be
externally visibly exposed as an outer visible component of
said vacuum cleaner.

5. The improvement in the vacuum cleaner according to claim 1,
wherein said housing includes a cylindrical portion and
non-cylindrical end portions arranged at opposite axial
ends of said cylindrical portion, said large surface
portion of said housing that is externally covered by said
exhaust filter material is at least a part of said
cylindrical portion of said housing, and said exhaust
filter material does not externally cover said end
portions.

6. The improvement in the vacuum cleaner according to claim 5,
wherein said filter material has the form of an annular
cylindrical tube, and said large surface portion of said
housing that is externally covered by said exhaust filter
material extends entirely circumferentially around said
cylindrical portion of said housing.

7. In a vacuum cleaner including a housing, a primary dirt
collector arranged in said housing, a suction motor unit
arranged in said housing, an inlet suction channel

communicating through said primary dirt collector to an inlet of said suction motor unit, and an exhaust outlet passage communicating from an outlet of said suction motor unit out of said housing to an environment outside of said vacuum cleaner,

an improvement comprising an exhaust filter arrangement that is interposed in said exhaust outlet passage and that comprises a tubular exhaust filter material arranged to completely or partially envelop at least a first portion of said housing, wherein an annular exhaust air space is formed as a portion of said exhaust outlet passage between said first portion of said housing and said tubular exhaust filter material.

8. The improvement in the vacuum cleaner according to claim 7, wherein said primary dirt collector is a primary filter bag.

9. The improvement in the vacuum cleaner according to claim 7, further comprising a motor protective filter interposed between said primary dirt collector and said suction motor unit.

10. The improvement in the vacuum cleaner according to claim 7, further comprising first and second securing elements that respectively removably secure and seal opposite axial ends of said tubular exhaust filter material onto said housing, and wherein said housing further includes a motor housing

6 portion in which said suction motor unit is arranged, and
7 said exhaust outlet passage further includes a motor
8 chamber enclosed in said motor housing portion and plural
9 through-flow openings passing from said motor chamber to
10 said annular exhaust air space.

1 **11.** The improvement in the vacuum cleaner according to claim 7.
2 wherein said exhaust filter material has a micron particle
3 size filtering quality.

1 **12.** The improvement in the vacuum cleaner according to claim 7,
2 wherein said exhaust filter arrangement further comprises
3 an elastic filter support body that supports the exhaust
4 filter material which is externally arranged.

1 **13.** The improvement in the vacuum cleaner according to claim 7,
2 wherein said exhaust filter material is externally arranged
3 and comprises and is formed by an air-permeable elastic
4 self-supporting body.

1 **14.** A vacuum cleaner comprising:

2 a housing including a main housing portion and two end
3 housing portions respectively arranged at opposite ends of
4 said main housing portion;

5 a primary dirt collector arranged inside said main
6 housing portion;

7 a suction motor unit that is arranged in said housing,
8 and that has a motor unit inlet and a motor unit outlet;

an inlet suction channel communicating through said primary dirt collector to said motor unit inlet;

an exhaust filter arrangement arranged outwardly relative to and externally covering at least a part of said main housing portion while forming an annular exhaust air space between said main housing portion and said exhaust filter arrangement, wherein said annular exhaust air space communicates outwardly through said exhaust filter arrangement to an environment outside of said vacuum cleaner; and

an exhaust outlet passage communicating from said motor unit outlet to said annular exhaust air space.

15. The vacuum cleaner according to claim 14, wherein said primary dirt collector, said main housing portion, and said exhaust filter arrangement are all arranged coaxially relative to each other about a common central axis.

16. The vacuum cleaner according to claim 15, wherein said main housing portion and said exhaust filter arrangement each respectively have a hollow cylindrical shape, and said exhaust filter arrangement extends entirely around a circumference of said main housing portion.

17. The vacuum cleaner according to claim 14, wherein said main housing portion and said exhaust filter arrangement each respectively have a hollow cylindrical shape, and said

4 exhaust filter arrangement extends entirely around a
5 circumference of said main housing portion.

1 18. The vacuum cleaner according to claim 14, wherein said
2 exhaust filter arrangement has a shape of a circular arc
3 segment of an annular partial-cylindrical shell, and
4 extends around a part of an outer circumferential perimeter
5 of said main housing portion.

1 19. The vacuum cleaner according to claim 14, wherein said
2 exhaust filter arrangement has a tubular shape and extends
3 around an entire outer circumferential perimeter of said
4 main housing portion.

1 20. The vacuum cleaner according to claim 14, wherein said
2 exhaust filter arrangement is externally exposed and
3 externally visible outside of said housing.